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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re reissue application of:  
Freeman et al.

Serial No.: 08/335,981  
Filed: November 8, 1994  
For: U.S. Patent 5,088,484

Group Art Unit: 3302  
Examiner: Michael A. Brown

# 15 Brief

In re Freeman et al.  
Reexamination Proceeding  
Control Number. 90/003,586  
Filed: October 3, 1994  
For: U.S. Patent 5,088,484  
Title: ORTHOPEDIC CASTING BANDAGE

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I, Francis A. Paintin, Registration No. 19,386 certify that this correspondence is being deposited with the U.S. Postal Service as First Class mail in an envelope addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231.

On 8/15/96  
  
Francis A. Paintin Reg. No. 19,386

BOX RE-EXAM

Assistant Commissioner for Patents  
Washington, DC 20231

Dear Sir:

BRIEF ON APPEAL

In accordance with the provisions of 37 CFR §1.191, applicants filed a timely Notice of Appeal in the subject application on July 8, 1996 from the rejections made by the Examiner in the Office Action dated January 17, 1996 (hereinafter referred to as "the Office Action"). This brief is submitted in full compliance with 37 CFR §1.192.

(1) Real Party in Interest

The real party in interest in the application involved in this appeal is applicants' assignee Johnson & Johnson  
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Professional, Inc., a corporation of New Jersey, a wholly owned subsidiary of Johnson & Johnson, a New Jersey corporation.

**(2) Related Appeals and Interferences**

Applicants are not aware of any related appeals or interferences. However, the prosecution of this reissue application has been merged with the reexamination (Control No. 90/003586) of applicants' Freeman et al. U.S. Patent 5,088,084 ("the Freeman patent"), of which patent this application seeks reissue. In addition, this reissue application was filed in part to request an interference with Scholz et al., U.S. Patent 5,342,291. Applicants respectfully invite attention to their "Request for Suspension of Prosecution and Declaration of Interference Under 37 CFR §1.607" which requests prompt declaration of interference with the Scholz patent.

**(3) Status of Claims**

Claims 1-33 are the claims on appeal, a copy of which is attached hereto in the Appendix to this brief. Claims 34-42, copied substantially from the Scholz patent, stand allowed in this application.

**(4) Status of Amendments**

An amendment to claims 1-33 was filed on 3/27/96 after the final rejection of those claims on 1/17/96. In an Advisory Action dated 6/13/96 it was indicated that the amendment will not be entered upon filing of an appeal.

### **(5) Summary of Invention**

The invention of the claims 1-33 on appeal is an orthopedic cast bandage (Fig. 3, ref. 12; col. 2, l. 14-21) comprising: (a) an open mesh fibrous tape (Fig. 4, ref. 46-52; col. 4, l. 41-56), which can be fiberglass (col. 3, l. 54-61); (b) a hardenable, and preferably storage stable liquid resin (col. 6, l. 34-49), which can be a water-hardenable urethane polymer (col. 7, l. 39-52), coated on the fibrous tape and being capable of curing to form a hardened plastic (col. 4, l. 5-9, and Fig. 5); and (c) at least one coloring agent, which can be a dye (col. 2, l. 25-37), visibly disposed on at least a portion of the fibrous tape (col. 2, l. 25-28, and Fig. 3) beneath said hardenable liquid resin coating (col. 4, l. 17-18), the coloring agent being stably retained by the fibrous tape while the tape is in a soft state in the presence of the hardenable liquid resin (col. 4, l. 17-23), wherein after the liquid resin becomes hard there is substantially no adverse effect on the coloring agent (col. 6, l. 27-29). Preferably, the coloring agents are printed on the fibrous tape (col. 4, l. 17-23, and Fig. 5, ref. 62 and 66).

### **(6) Issues on Appeal**

As previously noted, claims 34-42, offered for the purposes of an interference, are allowable and are not the subject of this appeal.

The issues on appeal as established by the final rejection of 1/17/96 are as follows:

(a) Whether or not claims 1-5, 12, 15, 19-20 and 23-24 are unpatentable under 35 USC §102(b) as being anticipated by Buese, U.S. Patent 4,898,159 (hereinafter "Buese 159");

(b) Whether or not claims 6-8, 10-11, 13-14, 21-22, 25-27 and 29-30 are unpatentable under 35 USC §103 as being obvious over Buese 159 in view of Gasper U.S. Patent 4,968,542 (hereinafter "Gasper");

(c) Whether or not claim 28 is unpatentable under 35 USC §103 as being obvious over Buese 159 in view of Gasper and further in view of Parker U.S. Patent 3,097,644 (hereinafter "Parker"); and

(d) Whether or not claims 31-33 are unpatentable under 35 USC §103 as being obvious over Buese 159 in view of Paxit, South African Patent Application No. 878838 published 7/27/88 (hereinafter "Paxit").

#### **(7) Grouping of Claims**

Applicants believe that all their claims 1-33 are patentable over the prior art, and, in that sense, "stand" together. However, the very nature of the four-part rejection suggests that all claims should not necessarily "fall" together. The Examiner implicitly admits that the claims of issue paragraphs (b) - (d) above are not unpatentable over Buese 159 alone and likewises admits that the claims of paragraphs (c) and (d) are not unpatentable over the combination of Buese 159 and Gasper alone. Finally, the rejection of claims 31-33 requires the Paxit reference as additional prior art. However, within the

individual groups (a) - (d), applicants have no objection to a finding that all claims of a group stand or fall together.

(8) Argument

Background

Before discussing the rejections, it should be noted that the Buese 159 reference has the same disclosure as Buese U.S. Patent 4,800,872, which was cited as a reference in the prosecution of applicants' Freeman patent, of which this application is a reissue. It should also be noted that the present examiner allowed Freeman patent claims 1-33 over the Buese disclosure. Although the present claims 1-33 are not exactly the same as the patent claims previously found allowable over Buese, they have been amended herein to make them, if anything, narrower than the patent claims.

Issue (a)

The Examiner's rejection of Group (a) claims 1-5, 12, 15, 19-20 and 23-24 as unpatentable under 35 USC §102(b) being anticipated by Buese 159 is improper and should be reversed.

Buese 159 deals with the application of a hardenable liquid resin, e.g., a polyurethane prepolymer, to a fabric tape, e.g., of fiberglass. The Buese disclosure, however, teaches first coating the tape with a soft binder material preferably at cutting station locations to "eliminate the ravel problem" (column 3, lines 1-21, column 4, lines 49-52), Buese suggests that a dye or other indicator can be incorporated into the soft binder material "so that the cutting machine can be indexed to

the presence of the binder" and the cutting done when the "coated portion of the fabric reaches the cutting station", e.g., for a length of 4-6 inches out of every 3-5 feet of tape (column 5, lines 1-12).

Buese 159 does not suggest applying a dye to the fabric; it is only an optional ingredient in the soft binder material. Nothing in the Buese disclosure teaches that the resin may have an adverse effect on the stability of the coloring agent or dye; the implication is to the contrary. It would be nothing more than pure hindsight, using applicants' own claim language as a guide, to find that the claimed structure is taught by, or would be obvious from, the Buese disclosure.

The Examiner acted correctly in previously allowing the Freeman patent claims 1-33 over the Buese disclosure. It is respectfully suggested that the presently amended claims under rejection should likewise be found allowable.

Issue (b)

The Examiner's rejection of Group (b) claims 6-8, 10-11, 13-14, 21-22, 25-27 and 29-30 as unpatentable under 35 USC §103 being obvious over Buese 159 in view of Gasper should also be reversed. The rejection states:

Buese '159 discloses an orthopedic cast bandage, substantially as claimed. However, Buese does not disclose the open mesh fibrous tape having at least two color agents disposed on the tape of (or?) the fibrous tape being polyester. Gasper teaches an open mesh fibrous tape comprising at least two coloring agents (col. 7, line 51 to col. 8, line 11) and fibers that are fiberglass or polyester (col. 4, lines 26-32). It would have been obvious to one of ordinary skill in the art at the time the invention was made that at least

two or more color agents could be disposed onto the fibrous tape and that the tapes could be made of polyester fibers as taught by Gasper. The two color agents would allow a pattern to be formed on the tape. The polyester fibers would be storable for a long shelf life. However, polyester is also suitable to accept a resin and to form a hardenable cast.

The principal deficiencies of the Buese 159 reference have been discussed under Issue (a) and these are not overcome by the addition of the Gasper reference.

A careful study of the entire Gasper reference reveals that not one word therein relates to use of a coloring agent or dye. The Examiner relies on the Gasper disclosure at column 7, line 51 to column 8, line 11. The portion at column 7, line 51 to the bottom of the column relates to the preparation of a liquid resin system with no reference to a coloring agent or dye. The remainder of the Gasper citation, i.e., column 8, lines 1-11, reads as follows:

The resin was coated onto various fabrics including fiberglass, polyester knit, and "Ace" bandage fabric. Each material has a different capacity for resin absorption which necessitated different coating weights to achieve good lamination of the layers in the final cured device. The fiberglass material was 45% resin. The polyester knit was 55%. The "Ace" bandage coating was at 60% resin. All of the samples with the exception of the Ace material were stable. The "Ace" material began to react with the resin very quickly indicating a considerable amount of water present.

The Examiner's conclusion that the Gasper reference teaches or suggests anything about use of a coloring agent or dye, or a pattern thereof, is entirely without basis in the explicit or implicit disclosure of the Gasper reference. The rejection of

the Group (b) claims should be reversed.

Issue (c)

The Examiner's rejection of Group (c) claim 28 under 35 USC §103 as being obvious over Buese 159 in view of Gasper and further in view of Parker should be reversed. As pointed out in detail under Issue (b), the Buese 159 and Gasper references do not alone or in combination teach or suggest the invention being claimed.

The Examiner has relied on Parker because it teaches that "a coating material can be made of cotton or synthetic fibers (column 15, line 47)." Primarily, Parker's disclosure is of a cloth tape to be rolled onto itself to form a toroidal roll from which it can be readily applied to a body part (column 1, lines 10-15). The cloth can be pretreated by subjecting it to "boiling water, oils, glycerine, petrolatum, or melted paraffin" as a conditioner for cotton (column 7, lines 18-37), or sized to make the roll stiff (column 11, lines 56-71). It can be used as a matrix for plaster of Paris or similar moisture sensitive hardening agents (column 12, lines 21-38). Parker has only a general teaching about the use of a color or pattern on its tubular cloth (column 5, lines 42-64). In sum, Parker teaches what has been known for over 30 years and adds nothing to the rejection. This rejection too should be reversed.

Issue (d)

The Examiner's rejection of Group (d) claims 31-33 under 35 USC §103 as unpatentable over Buese 159 in view of Paxit

is traversed. The deficiencies in the Buese reference have been explained in detail above and need not be repeated here.

The Paxit reference states (at pages 2 and 4):

This invention relates to the production of decorated polymeric products such as sheet material and more particularly to the production of decorated sheet material produced from glass fibre reinforced polyester resin. The sheet material produced according to the present invention may be either flat or profiled and may be used in various industrial and domestic applications, such as in the construction of roofs or patio coverings, or as fascia boards or decorated wall paneling. One form of the invention provides for the production of striped polyester panels which, it is expected, will become increasingly popular in the trade in particular for the construction of patios and the like.

It is known in the trade to produce striped polyester panels by depositing a dye containing liquid or paste in stripes on a barrier or release sheet of film such as a cellulose film. The deposited stripe material is then partially cured by heating and the liquid polyester resin is then deposited on the partially cured stripes and suitable reinforcing means such as chopped glass fibers are thereupon deposited onto the polyester composition either with or without a further reinforcing layer of polyester sheeting.

\* \* \*

According to the present invention a method of forming decorated polymeric products is characterized in that it includes the steps of incorporating in an uncured mass of liquid polymeric material a pre-printed decorative sheet of tissue material which is compatible with the polymeric material and curing the polymeric material by the application of heat (emphasis added).

Some important points are evident from the foregoing quotation: the technology of the reference clearly relates to the art of decorative wall paneling for the construction of patios and the like; the "dye or pigment containing liquid or paste" is applied to a "barrier or release sheet of film such as a

cellulose film"; and/or "a pre-printed decorative sheet of tissue material" is incorporated in an uncured mass of curable liquid polymer. The term "release sheet" is generally used to refer to a sheet that is removed from a structure before use. Clearly, a sheet such as a cellulose film is quite obviously not an element of structure remotely comparable to the "open mesh fibrous tape" for use in an orthopedic cast bandage as in the claimed invention. The pre-printed "tissue material" is a calendared polyacrylic or polyester material. While another element called a "surface tissue" may apparently be fiberglass (see page 6), it is clear that the surface material is not the tissue that is pre-printed (see pages 7 and 8, and claims 7, 12 and 13).

The Paxit reference is precisely what it appears to be, namely, a publication introduced by the reexamination requester from the patio construction trade and being used here as allegedly relevant to the obviousness of an invention made in the distant orthopedic bandage art. In summary, the teachings of the Paxit reference are clearly irrelevant *per se* to the present invention; however, it is obvious that the knowledge of those skilled in the patio construction trade is not fairly attributable to those in the orthopedic bandage art. It is hard to imagine two art areas less related. This rejection too should be reversed.

Summary of Argument

Every rejection made by the Examiner critically depends on the disclosure of the Buese 159 patent whose express teachings are to mix a coloring agent in with a soft binder material which is only applied to mark cutting locations on a few inches out of every 3 to 5 feet. Nothing in Buese or Parker suggests the desire for color/dye stability. Gasper has no disclosure at all about the use of color or dye. The Paxit reference deals with the construction of patio panels rather than orthopedic cast bandages and cannot fairly be combined with the other references even if its teachings were relevant. Taken as a whole, the references cannot be said to teach or suggest applicants' claimed invention.

It is respectfully suggested that all the rejections be reversed and that all claims on appeal be allowed.

Respectfully submitted,

  
Francis A. Paintin  
Registration No. 19,386

Date: *August 15, 1996*

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**Certificate of Service**

As required by 37 CFR §1.550(e), a true copy of this paper has been forwarded this date by first-class mail to the reexamination requester at the following address:

John R. Schiffhauer  
2200 Sand Hill Road Suite 100  
Menlo Park, CA 92025

Date August 15, 1996

  
Francis A. Paintin

(9) APPENDIX

Claims 1-31 on Appeal

1. An orthopedic cast bandage comprising:
  - (a) an open mesh fibrous tape;
  - (b) a hardenable liquid resin coated on the fibrous tape and being capable of curing to form a hardened plastic; and
  - (c) at least one coloring agent visibly disposed on at least a portion of the fibrous tape beneath said hardenable liquid resin coating, the coloring agent being stably retained by the fibrous tape while the tape is in a soft state in the presence of the hardenable liquid resin, wherein after the liquid resin becomes hard there is substantially no adverse effect on the coloring agent.
2. The orthopedic cast bandage of claim 1 wherein the open mesh fibrous tape comprises fibers selected from the group consisting of polyester, cotton, and glass fibers.
3. The orthopedic cast bandage of claim 2 wherein the hardenable liquid resin is a water hardenable polyurethane prepolymer.
4. The orthopedic cast bandage of claim 3 wherein the liquid resin coated open mesh fibrous tape is storage stable for a period in excess of two months at 50°C. when packaged in a sealed container.
5. The orthopedic cast bandage of claim 1 wherein the liquid resin coated fibrous tape is storage stable for a period in excess of one week at 50°C. when packaged in a sealed container.
6. The orthopedic cast bandage of claim 1 wherein the liquid resin coated open mesh fibrous tape has an extensibility of greater than about 10% prior to curing of the liquid resin.
7. The orthopedic cast bandage of claim 1 wherein the open mesh fibrous tape is a knitted polyester fabric comprising textured polyester yarns in the longitudinal direction.
8. The orthopedic cast bandage of claim 1 comprising at least two different coloring agents visibly disposed on at least a portion of the fibrous tape and forming a predetermined visible pattern of at least two colors on the fibrous tape, the coloring agents being stably retained by the fibrous tape in the presence of the hardenable liquid resin.

9. The orthopedic cast bandage of claim 8 wherein the coloring agents visibly disposed on at least a portion of the fibrous tape are pigment printed coloring agents.

10. The orthopedic cast bandage of claim 8 wherein the coloring agents visibly disposed on at least a portion of the fibrous tape are wet printed coloring agents.

11. The orthopedic cast bandage of claim 8 wherein the coloring agents visibly disposed on at least a portion of the fibrous tape are transfer printed coloring agents.

12. The orthopedic cast bandage of claim 1 wherein the coloring agent visibly disposed on at least a portion of the fibrous tape is a pigment printed coloring agent.

13. The orthopedic cast bandage of claim 1 wherein the coloring agent visibly disposed on at least a portion of the fibrous tape is a wet printed coloring agent.

14. The orthopedic cast bandage of claim 1 wherein the coloring agent visibly disposed on at least a portion of the fibrous tape is a transfer printed coloring agent.

15. An orthopedic cast bandage comprising:

(a) an open mesh fibrous tape;  
(b) a hardenable liquid resin coated on the fibrous tape and being capable of curing to form a hardened plastic; and  
(c) at least one dye penetrated into or chemically bound to at least a portion of the fibrous tape beneath said hardenable liquid resin coating while the tape is in a soft state, the dye being stably retained by the fibrous tape in the presence of the hardenable liquid resin, wherein after the liquid resin becomes hard there is substantially no adverse effect on the dye.

16. The orthopedic cast bandage of claim 15 comprising at least two dyes penetrated into or chemically bound to at least a portion of the fibrous tape forming a visible dyed pattern of at least two colors on the fibrous tape.

17. The orthopedic cast bandage of claim 15 wherein the open mesh fibrous tape comprises polyester fibers.

18. The orthopedic cast bandage of claim 17 wherein the open mesh fibrous tape comprises textured polyester yarn in the longitudinal direction.

19. The orthopedic cast tape of claim 15 wherein the open mesh fibrous tape comprises glass fibers.

20. The orthopedic cast tape of claim 15 wherein the liquid resin coated open mesh fibrous tape is storage stable for a period in excess of one week at 50°C. when packaged in a sealed container.

21. The orthopedic cast bandage of claim 15 wherein the dye penetrated into or chemically bound to at least a portion of the fibrous tape comprises a sublimable disperse dye.

22. The orthopedic cast bandage of claim 15 wherein the sublimable disperse dye is disposed on only one side of the open mesh fibrous tape.

23. The orthopedic cast bandage of claim 15 wherein the hardenable liquid resin is a water hardenable polyurethane prepolymer.

24. An orthopedic cast comprising a plurality of layers of open mesh fibrous tape disposed within a hardened polymer matrix, wherein at least the outer layer of the open mesh fibrous tape comprises at least one dye penetrated into or chemically bound to at least a portion of the fibrous tape while the tape is in a soft state, the dye being stably retained in the presence of the hardened polymeric matrix, wherein after the hardened polymeric matrix becomes hard there is substantially no adverse effect on the dye.

25. A process for the production of an orthopedic cast bandage comprising the steps:

- (a) contacting an open mesh fibrous tape with a substrate bearing a sublimable dye;
- (b) heating the substrate and the open mesh fibrous tape to cause the sublimable dye to transfer to the open mesh fibrous tape to thereby color at least a portion of the open mesh fibrous tape; and
- (c) coating the colored, open mesh fibrous tape with a liquid resin capable of curing to form a hardened plastic.

26. The process of claim 25 wherein said open mesh fibrous tape comprises polyester fibers.

27. The process of claim 25 wherein said open mesh fibrous tape comprises glass fibers.

28. The process of claim 25 wherein said open mesh fibrous tape comprises multiple filament textured yarns.

30. The process of claim 29 wherein said liquid resin capable of curing to form a hardened plastic is a water hardenable polyurethane prepolymer.

31. A process for preparing an orthopedic cast tape comprising the steps:

- (a) providing a knit polyester fabric comprising textured polyester yarn in the longitudinal direction;
- (b) heat treating the knit polyester yarn in a substantially tensionless condition at a first elevated temperature sufficient to cause the knit polyester tape to shrink longitudinally;
- (c) transfer printing the shrunken knit polyester tape in a substantially tension-free state and at a second elevated temperature which is less than or about the same as the first elevated temperature; and
- (d) coating the transfer printed knit tape with a liquid resin capable of curing to form a hardened plastic.

32. The process of claim 31 wherein said transfer printing step is conducted by contacting the shrunken knit polyester tape with a substrate bearing at least two subliminal dyes to thereby transfer both of said subliminal dyes to said shrunken knit polyester tape.

33. The process of claim 32 wherein said liquid resin capable of curing to form a hardened plastic is a water hardenable polyurethane prepolymer.